

Substitute for Form 1449 A' &amp; B/PTO

Complete if Known

Application Number	10/690,569
Confirmation Number	5982
Filing Date	October 23, 2003
First Named Inventor	Charles Frederick James BARNES
Art Unit	2655
Examiner Name	Unknown
Attorney Docket Number	Q-72585

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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1 of 2

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
JLM		US 6,272,083		08/07/2001	Aratani
		US 6,078,471		06/20/2000	Fisk
		US 6,353,317		03/05/2002	Green et al
		US 5,606,474		02/25/1997	Ketchersid III
		US 6,081,402		06/27/2000	Cho
		US 5,264,975		11/23/1993	Bajoreket et al
		US 6,320,725		11/20/2001	Payne et al
		US 5,212,680		05/18/1993	Toupin
		US 5,739,975		04/14/1998	Parks et al
		US 4,903,151		02/20/1990	Mizukami et al
		US 4,636,893		01/13/1987	McClure
		US 5,227,211		07/13/1993	Eltoukly et al
		US 5,995,338		11/30/1999	Watanabe et al

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>4</sup>
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## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>4</sup>
JLM		Carley et al, <i>Communication of the ACM</i> , 43(11):73-80 (2000)	
		Solin et al, "Giant Magneto Resistance in Zero-gap HgCdTe", <a href="http://www.neci.nj.nec.com/homepages/thio/gmr.htm">www.neci.nj.nec.com/homepages/thio/gmr.htm</a>	
		"Composite Diamond Coating", Information Sheet, <a href="http://www.surfacetechnology.com">www.surfacetechnology.com</a>	
		"Artificial Diamond Coating and Thin Film Technologies", Information Sheet, Technologies of RRC Kurchatov Institute <a href="http://www.kiae.ru/eng/str/technology/t8.html">www.kiae.ru/eng/str/technology/t8.html</a>	
		"Diamond Films for Microelectromechanical Systems (MEMS), Information Sheet, <a href="http://www.techtransfer.anl.gov/techtour/diamondmems.html">www.techtransfer.anl.gov/techtour/diamondmems.html</a>	
		Mohn, <i>Nature</i> , 400:18-19 (1999)	
		"Glass Substrate for Magnetic Disk in HDD, Information sheet, <a href="http://www7.big.or.jp/~cgi19786/ngf/nglass/ng06e.html">http://www7.big.or.jp/~cgi19786/ngf/nglass/ng06e.html</a>	
		"Zero Expansion Glass and Glass Ceramics", Information sheet, <a href="http://www7.big.or.jp/~cgi19786/ngf/nglass/ng06e.html">http://www7.big.or.jp/~cgi19786/ngf/nglass/ng06e.html</a>	
		"Ultra Low Expansion Glass", Information sheet, <a href="http://www.pgo-online.com/intl/jse/frameroute/genericset.html?Content=/intl/katalog/ule.html">www.pgo-online.com/intl/jse/frameroute/genericset.html?Content=/intl/katalog/ule.html</a>	
		Aschke, "Fit for Future Chip Technology", Company Profile on Schnott Lithotec, <a href="http://www.schott.com/magazine/English/download/info99/si099_02_euvi.pdf">http://www.schott.com/magazine/English/download/info99/si099_02_euvi.pdf</a>	
JLM		"Controlled Expansion Alloys", Comparison Table from Daido-Special Metals LTD, <a href="http://www.dsml.co.jp/english/controlled_expansion.htm">http://www.dsml.co.jp/english/controlled_expansion.htm</a>	
		McDaniel, "Vsuvius Zyrock", A Cookson Company Information Sheet, <a href="http://www.techceramics.com/fusedsilica.html">http://www.techceramics.com/fusedsilica.html</a>	

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		Country Code <sup>2</sup>	Number <sup>4</sup>	Kind Code <sup>3</sup> (if known)			
JMY		EP	0 463 908		06/11/1991	Thomson-CSF	Abstract
		EP	0 895 237		02/03/1999	Samsung Electronics Co., Ltd.	
		EP	1 114 393		07/11/2001	Sumitomo Electric Industries, Ltd.	
		EP	1 156 479		11/21/2001	Mitsubishi Chemical Corporation	
		EP	1 381 031		01/14/2004	Jean-Pierre NOZIERES	

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JMY		"Thermal Properties, GE Quartz, <a href="http://www.gequartz.com/en/thermal.htm">http://www.gequartz.com/en/thermal.htm</a>	Info Sheet
		"The Art of the Quantum Leap", Economist Story, <a href="http://www.economist.com/science/tq/displayStory.cfm?Story_ID=885080">http://www.economist.com/science/tq/displayStory.cfm?Story_ID=885080</a>	
		"Giant Magnetoresistance", <a href="http://srdweb2.dl.ac.uk/srs/other/ow/MAGNETISM/Giant_Magneto.html">http://srdweb2.dl.ac.uk/srs/other/ow/MAGNETISM/Giant_Magneto.html</a>	Info Sheet
		"Lubricants for disks", <a href="http://www.almaden.ibm.com/st/projects/lubricants/lube/">http://www.almaden.ibm.com/st/projects/lubricants/lube/</a>	Info Sheet-Pg Discont.
		"M5.004 Challenges of Head-Disk Interface Tribology for Ultrahigh Density Magnetic Recording", Invited Session by Jing Gui; <a href="http://www.eps.org/aps/meet/MAR00/baps/abs/S4840004.html">http://www.eps.org/aps/meet/MAR00/baps/abs/S4840004.html</a>	
		"Tribology of Magnetic Media and Recording Technologies"	Intro page
		"Technology Research and Development - Basics of Magnetic Recording", <a href="http://www.informt.com/readrite/magbasis.html">http://www.informt.com/readrite/magbasis.html</a>	Info Sheet
		"HMT Delivers Volume Shipments of Advanced GMR Media to Maxtor", <a href="http://www.semiconductorfabtech.com/industry.news/9911/10.02.shtml">http://www.semiconductorfabtech.com/industry.news/9911/10.02.shtml</a>	News Story
		"Evolution of HSS Head"	Info Sheet
		"Technology", Headway Technologies, <a href="http://www.hdwy.com/technology/technology.html">http://www.hdwy.com/technology/technology.html</a>	Article
		Caruso et al, "A New Perspective on Magnetic Field Sensing", <a href="http://www.et.byu.edu/eit444/Links/SensorsDec1998/SensorsMagFieldDec1998.shtml">http://www.et.byu.edu/eit444/Links/SensorsDec1998/SensorsMagFieldDec1998.shtml</a>	
		Singer, "Hard Disk Recording Aims to Get Perpendicular", <a href="http://www.reed-electronics.com/semiconductor/article/CA240215?text=hard+disk+recording+aims+to+get+perpendicular">http://www.reed-electronics.com/semiconductor/article/CA240215?text=hard+disk+recording+aims+to+get+perpendicular</a>	
		Brain, "How Hard Disks Work", <a href="http://www.howstuffworks.com/hard-disk.htm">www.howstuffworks.com/hard-disk.htm</a>	
		"Fujitsu and Sony Develop World's First 1.3GB 3.5-inch MO Disk System Prototype; <a href="http://pr.fujitsu.com/jp/news/1998/Nov/5-e.html">http://pr.fujitsu.com/jp/news/1998/Nov/5-e.html</a>	News Article
		"Hard Disk Tutorial", <a href="http://stweb.peel.edu.on.ca/pcswweb/Pc_tut/04disks.htm">http://stweb.peel.edu.on.ca/pcswweb/Pc_tut/04disks.htm</a>	
		"Giant Magnetoresistance When Big Hard Drives Aren't Big Enough", <a href="http://www.wired.com/archive/4.05/geek/html">http://www.wired.com/archive/4.05/geek/html</a>	Article
		"Headway Technologies", <a href="http://www.hdwy.com/technology/technology.html">http://www.hdwy.com/technology/technology.html</a>	Article
		"Single vs. Multiple Actuators", <a href="http://www.pcguides.com/ref/hdd/op/act/Multiple-c.html">http://www.pcguides.com/ref/hdd/op/act/Multiple-c.html</a>	Article
	"Storage/Hard Disks", <a href="http://www.pctechguide.com/04disks.htm">http://www.pctechguide.com/04disks.htm</a>	Info Sheet	
	"What is RAID?", <a href="http://www.uni-mainz.de/~neuffer/scsi/what_is RAID.html">http://www.uni-mainz.de/~neuffer/scsi/what_is RAID.html</a>	Article	

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